

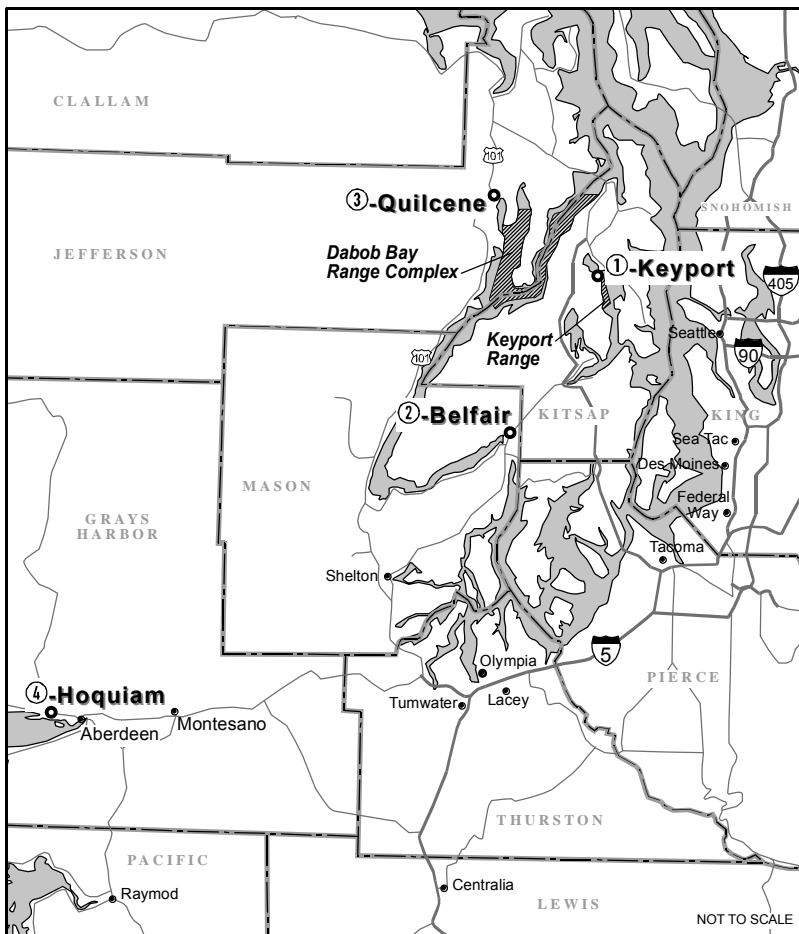


Department of the Navy  
Northwest Range Complex  
Extension EIS/OEIS



# Welcome

## Scoping Meetings for the Northwest Range Complex Extension Environmental Impact Statement/ Overseas Environmental Impact Statement



(1) Keyport, Monday, November 17  
6:00 p.m. to 9:00 p.m.  
Naval Undersea Museum, Lobby  
610 Dowell St.  
Kitsap County

(2) Belfair, Tuesday, November 18  
6:00 p.m. to 9:00 p.m.  
Elementary School, Gym  
NE 22900 Hwy 3  
Mason County

(3) Quilcene, Wednesday, November 19  
6:00 p.m. to 9:00 p.m.  
Public School, Multi- Purpose Room  
294715 Hwy 101  
Jefferson County

(4) Hoquiam, Thursday, November 20  
6:00 p.m. to 9:00 p.m.  
High School, Cafeteria  
501 West Emerson  
Grays Harbor County



# Department of the Navy Northwest Range Complex Extension EIS/OEIS NEPA Process



***The National Environmental Policy Act guides the environmental impact analysis.***

The Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS) will analyze the following resources to determine potential impacts to the local environment for extension of the Northwest Range Complex.

## ***Range Operations***

Water Quality, Marine Resources, Noise, Air Quality, Hazardous Materials, Hazardous Waste



## ***Natural Resources***

Marine and Terrestrial Flora and Fauna, Threatened and Endangered Species



## ***Cultural Resources***

Historic and Archaeological Resources, Usual and Accustomed Fishing

## ***Human Resources***

Aesthetics, Land and Shoreline Use, Socioeconomics, Recreation, Environmental Justice, Public/Children's Health and Safety, Transportation



***Your involvement is essential to the NEPA process***

## ***The EIS Timeline***

**Notice of Intent Published  
September 2003**

**Scoping**

**Preparation of  
Draft EIS/OEIS**

**Notice of Availability of  
Draft EIS/OEIS**

**Public Comment Period  
45 Days**

**Public Hearing**







**Preparation of  
Final/OEIS**

**Notice of Availability of  
Final EIS/OEIS**

**Public Comment Period  
30 Days**

**Record of Decision**

***There are many opportunities for your involvement in the EIS/OEIS process.***

-  **Participate** in scoping meetings
-  **Identify** community-specific issues and concerns
-  **Ensure** you are on the mailing list
-  **Read and comment** on the Draft EIS/OEIS
-  **Participate** in public hearings
-  **Review** the Final EIS/OEIS





# Department of the Navy Northwest Range Complex Extension EIS/OEIS Mission



The mission of the Naval Undersea Warfare Center Division, Keyport (NUWC Keyport) is to provide test and evaluation; in-service engineering, maintenance, and repair; fleet readiness; and industrial-base support for undersea warfare systems, countermeasures, and sonar systems. NUWC Keyport executes other responsibilities as assigned by the Commander, Naval Undersea Warfare Center.

The Northwest Range Complex provides the space and facilities to support this mission. This Complex is composed of the Keyport Range, Dabob Bay Range Complex, and the Quinault Underwater Tracking Range.

## Keyport Range

- ✓ Shallow/sloping water
- ✓ Existing shore-based facilities
- ✓ Access to pier
- ✓ Mild bottom slope to simulate mine placement
- ✓ Real-world commercial traffic
- ✓ Barge access for retrieval and moorage
- ✓ Shore-to-shore visibility
- ✓ Unique bottom characteristics

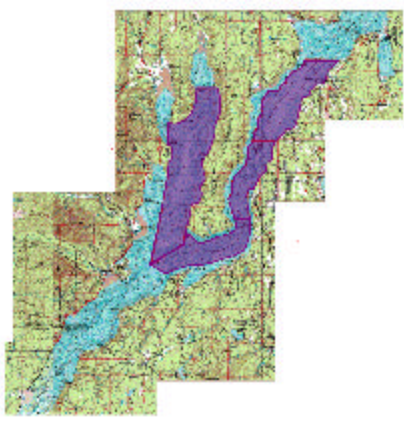


### No-Action Alternative:

- Maintain existing MOA boundaries
- Continue existing operations

## Dabob Bay Range Complex

- ✓ Deep water
- ✓ Long endurance runs
- ✓ Freshwater sources
- ✓ Multiple underwater environments
- ✓ Space to interface with submarines
- ✓ Barge access for retrieval and moorage
- ✓ Shore-to-shore visibility
- ✓ Unique bottom characteristics

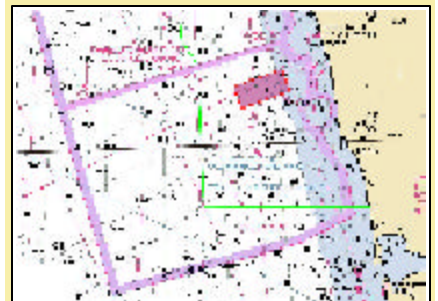


### No-Action Alternative:

- Maintain existing Hood Canal MOA Boundaries
- Continue existing operations

## Quinault Underwater Tracking

- ✓ Surf zone access
- ✓ Large underwater space with multiple depths
- ✓ Ability to integrate with overwater airspace operations
- ✓ Space for multiple fleet maneuvering
- ✓ Unique bottom characteristics



### No-Action Alternative:

- Maintain existing range Boundaries
- Continue existing operations





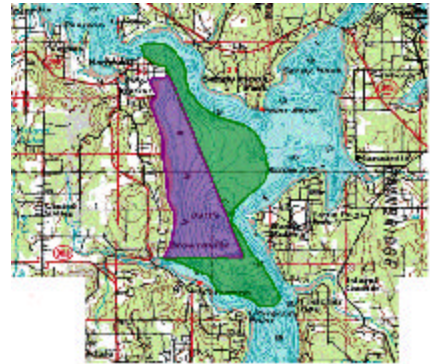
# Department of the Navy Northwest Range Complex Extension EIS/OEIS Alternative 1



Naval Undersea Warfare Center Division, Keyport (NUWC Keyport) proposes to extend the Northwest Range Complex operating areas (Dabob Range Complex, Keyport Range, and Quinault Underwater Tracking Range) to provide adequate space and volume to support existing and future research, test, and evaluation operations for the unmanned and manned vehicle program in multiple marine environments. Three action alternatives have been identified under the proposed action. Under each alternative, existing operations continue but extension of the military operating areas (MOAs) would occur. A no-action alternative is also identified where no changes to existing range operations and boundaries would occur.

## Keyport Range

- Extend (green area) the MOA boundaries
- Continue existing and add new operations



## Dabob Bay Range Complex

- Extend (green area) the MOA boundaries in Hood Canal North and South
- Continue existing and add new operations
- Conduct shallow water analysis



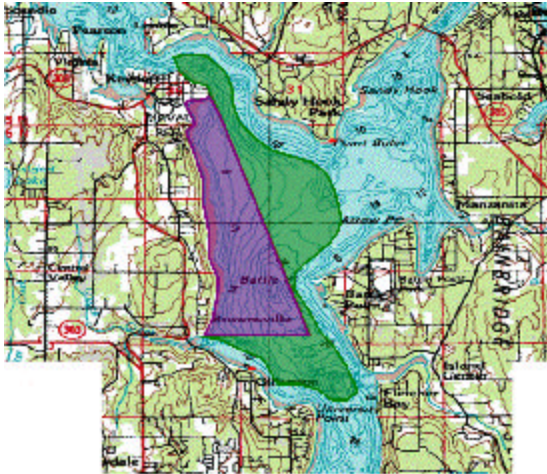
## Quinault Underwater Tracking Range

- Extend (green area) the MOA boundaries to coincide with airspace warning area W-237A
- Continue existing and add new operations



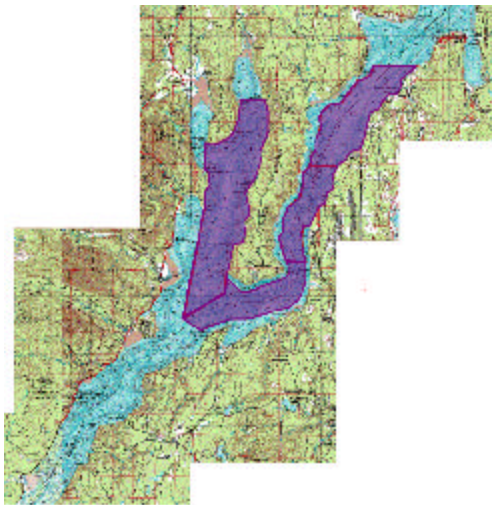


# Department of the Navy Northwest Range Complex Extension EIS/OEIS Alternative 2



## Keyport Range

- Extend the (green area) MOA boundaries
- Continue existing and add new operations



## Dabob Bay Range Complex

- Maintain (purple area) existing Hood Canal MOA boundaries
- Continue existing and add new operations
- No shallow water analysis



## Quinault Underwater Tracking Range

- Extend the MOA boundaries to coincide with airspace warning area W-237A
- Continue existing and add new operations



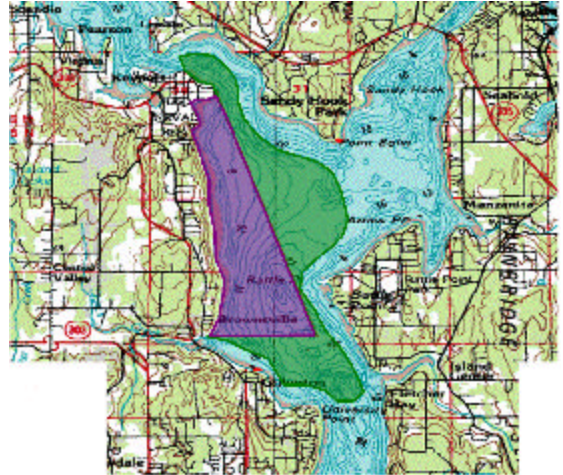


# Department of the Navy Northwest Range Complex Extension EIS/OEIS Alternative 3



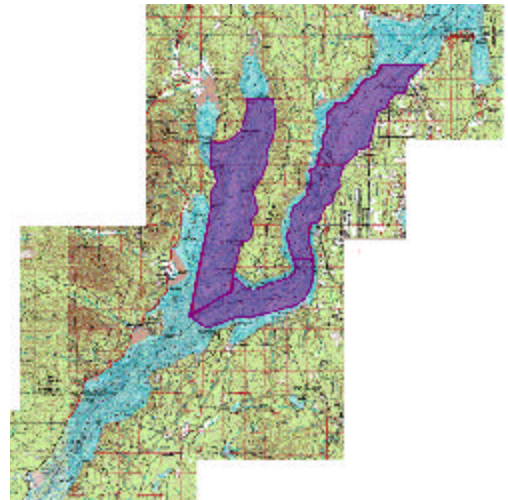
## Keyport Range

- Extend (green area) the MOA boundaries
- Continue existing and add new operations



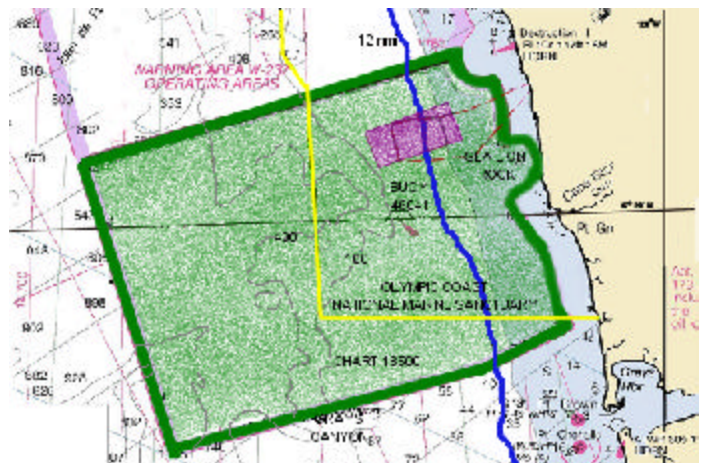
## Dabob Bay Range Complex

- Maintain existing Hood Canal MOA boundaries
- Continue existing and add new operations
- Conduct shallow water analysis



## Quinault Underwater Tracking Range

- Extend (green area) the MOA boundaries to coincide with airspace warning area W-237A
- Continue existing and add new operations





# Department of the Navy Northwest Range Complex Extension EIS/OEIS **Proposed Action**



NUWC Keyport proposes to extend the Northwest Range Complex operating areas (Keyport Range, Dabob Bay Range Complex, and Quinault Underwater Tracking Range) to provide adequate space to support existing and future research, test, and evaluation operations for the evolving unmanned and manned vehicle program needs in multiple marine environments. Three action alternatives have been identified to implement the proposed action. Each action alternative includes the continuation of existing operations and incorporates the proposed extensions. The No- Action Alternative is defined as no change to existing range operations or boundaries.

Northwest Range Complex Extension EIS/OEIS				
<i>Project Components</i>	<i>Alternative 1</i>	<i>Alternative 2</i>	<i>Alternative 3</i>	<i>No-Action Alternative</i>
<b>Dabob Range Complex</b>				
Continue Existing Activities	✓	✓	✓	✓
Conduct New Activities	✓	✓	✓	
Add Shallow Water Analysis	✓		✓	
Extend Hood Canal Military Operating Area North and South	✓			
<b>Keyport Range</b>				
Continue Existing Activities	✓	✓	✓	✓
Conduct New Activities	✓	✓	✓	
Extend Operating Area	✓	✓	✓	
<b>Quinault Underwater Tracking Range</b>				
Continue Existing Activities	✓	✓	✓	✓
Conduct New Activities	✓	✓	✓	
Extend Operating Area	✓	✓	✓	

The *Purpose and Need* of the Proposed Action is to provide adequate testing space in multiple marine environments for existing and new range operations in the Pacific Northwest at facilities and ranges in the vicinity of NUWC Keyport. The need for the proposed action is to meet both the existing and future operational requirements of NUWC Keyport for test, evaluation, and training services in multiple environments.





**Department of the Navy**  
**Northwest Range Complex Extension EIS/OEIS**  
**Sound**

What uses sound in air to navigate and find prey?

Bats use sonar at night when visibility is poor.



The water surface forms a strong boundary. Sound underwater bounces off the underside of the surface boundary and can travel a long way.

Why use sound underwater?

Visibility underwater is poor, sound is used by whales and dolphins to communicate, navigate and find prey.

What is one difference between sound in air and in water?

Sound underwater goes about 4 times faster than sound in air because water is denser than air.

What does the term SONAR stand for?

**SOund NAavigation and Ranging**  
It is the use of sound to find out where you are, where you are going and how far things are from you.

Where can I find out more about SONAR?

**Echo- location**  
<http://hcs.harvard.edu/~husn/BRAIN/vol1/echo.html>

**SEEING WITH SOUND**  
<http://www.sonicvision.co.nz/bat/index.html>



## Underwater Sound

### Two Types of Sonar

#### Active and Passive

ACTIVE SONAR is putting sound into the water.

An example of ACTIVE SONAR is when an Orca makes a sound and then listens to the return.

The return is the same as an echo.



If something is close the echo returns quickly. If something is far the echo may return after a longer time delay.

PASSIVE SONAR is listening for something that is already making sound. It is like listening to a bird singing.

An underwater microphone called a hydrophone is used to listen to sounds.